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ABSTRACT

This study examines factors that influence teacher acceptance and support of interactive television (ITV). The factors include: (1) good inservice on ITV; (2) appropriateness of subject matter; (3) student motivation; (4) class size; (5) ITV's allowing low-enrollment classes; (6) job losses or gains; (7) professional growth; (8) peer and administrative support; (9) equipment training; (10) technical support; (11) participation in decision-making; and (12) challenge. The study surveyed 55 K-12 teachers in Minnesota who use ITV, with 38 completed responses. Teachers were asked to identify factors that influenced their support of ITV and then to rank factors in order of importance. Eight factors were checked by at least 55% of the teachers as being influential. The four highest-scoring factors included sufficient technical support, ITV training, subject appropriateness, and professional growth. Factors associated with low responses were decision-making participation, student motivation, and class size. The factors rated most important included professional growth, subject appropriateness, ITV's enabling low-enrollment classes, training, and inservice. Technical support ranked relatively low in the "importance" category, possibly due to the existence of adequate training among respondents. The eight factors identified by this research should be stressed in designing any ITV program, with particular focus on technical training and support. (Contains 14 references.) (TES)

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FACTORS THAT INFLUENCE TEACHER ACCEPTANCE OF INTERACTIVE TELEVISION

A Research Report
Submitted to the Faculty of the
Center for Information Media
College of Education
St. Cloud State University
in Partial Fulfillment of the Requirements
for the Degree
Master of Science

by
Gerald E. Schnabel

St. Cloud, Minnesota
July, 1992

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Chapter 1

INTRODUCTION

Ever since Alexander Graham Bell spoke the words "Mr. Watson, come here, I need you" over the first telephone, telecommunications have increasingly become a part of our daily routine. People can now get up in the morning and turn on the radio or watch a live satellite transmission from the other side of the world on television. They may go to work and check their electronic mail, use an online data base, participate in a video or audio teleconference with locations across the country or fax materials anywhere in the world. Minnesota's students, in an increasing number of school districts around the state, use a descendant of Edison's invention: two-way interactive television (ITV). ITV has been used in Minnesota's schools since 1980, when six rural schools joined together as a cooperative and began broadcasting classes between member schools.

Distance learning is nothing new. For years mail has been used to span the distance between teacher and learner in the form of correspondence courses. Ever since this

first use of distance learning, technologies have emerged to enhance the communication between teacher and student. Among these technologies are audio cassette, educational public television, online computers and modems, slow scan television, audio teleconferencing, microwave, cable, fiber optics and two-way interactive television.

Currently 149 school districts in Minnesota use ITV as a means to expand learning opportunities for students (Distance Education for All, 1990). When looking at ITV for the first time a district may identify many areas of concern, but three areas seem to be common for all districts. These areas of concern are choosing the type of technology to use to transmit the signal, ITV's effectiveness in learning as compared to the traditional classroom and the role the teacher plays in the success of ITV.

The concern with technology, at first glance, seems to be the most important of the three. Schools must determine how they will transmit the data, choosing from microwave, fiber optics, coaxial cable or other delivery systems. Classrooms must be equipped with video cameras, television monitors, microphones, switchers, VCRs and other hardware. Technology has the highest obvious cost and can be the most confusing. But Morehouse (1987) contends that ITV, like all technology is more a function

of community resources, long range plans and availability of outside support than the merits or disadvantages of a particular technology. All of the technologies (cable, microwave, fiber optics) work to link teacher and students. Johnson and Tully (1989), reporting on five different delivery technologies, found that each was effective. One may conclude from these and similar studies that any of the major technologies now available will transmit audio and video from one site to another.

The second question to be addressed is ITV's effectiveness. Do students learn as well through an ITV system as they learn in a traditional classroom setting? Its advocates often conclude that ITV is effective. Morehouse (1987) found that there was no statistically significant difference in achievement between traditional classes and those taught on ITV. In their review and meta-analysis of media research, Clark and Salomon (1986) found that no one medium enhances learning more than any other medium.

So, on to the last and perhaps the most important question: What role does the teacher play in the development and success of ITV? Kitchen and Kitchen (1988) place the ultimate success or failure of ITV with the teacher. They contend that if teachers feel uncomfortable with ITV, and if this level of discomfort is

not reduced, ITV will work ineffectively or not at all. Morehouse, Hoaglund and Schmidt (1987) conclude that without the active support and participation of the staff, ITV systems do not work (p. 9).

Statement of the Problem

The problem to be resolved in this study is to discover those factors which are most likely to influence teacher acceptance/support of ITV.

Specific questions to be addressed are:

1. Based on 12 factors identified in previous research, how do ITV teachers in Minnesota compare regarding being positively influenced in their acceptance/support of ITV? These factors are: good inservice, teaching a subject appropriate for ITV, motivated students, smaller class size, teaching classes they otherwise would not because of low enrollment, no job lose and/or job gains due to ITV, professional growth, peer, administrative and project director support, adequate training with the equipment, technical support, participation in decision making and the challenge.
2. Which of the 12 identified factors was the most influential factor?
3. Which of the 12 identified factors was the least influential factor?

Significance of the Study

Jason Ohler, Director of the Educational Technology Program at the University of Alaska, stated that two major reasons to use ITV as an educational delivery system are to provide equity of educational opportunities and to make up for lack of conventional resources (Bruder, 1989, p. 31). As more school districts in Minnesota and throughout the nation spend more money to establish educational equity through use of ITV, research is needed on how to work with teachers as the key element of ITV. Morehouse, Hoaglund and Schmidt (1987) state that for the technology to work, teachers and other support personnel must be trained, supported and encouraged (p. 9). Without the active support and participation of staff, these technical systems do not work. Hobson (1988) reiterates the critical role teachers play in the success of ITV when he states that "teacher involvement and training are imperative for ITV to be successful" (p. 66).

Definition of Terms

Accept/Support. To respond in a positive manner through action, involvement or verbal support.

Audio Teleconferencing. Conducting conferences between persons remote from one another by means of a telecommunications system that uses only the audio component (i.e., two-way radio).

Cable. The technology of transmitting television programs through coaxial cable rather than through the air.

Fiber Optics. A cable made of glass that transmits light signals instead of electronic signals. Each fiber is as small as a human hair and can carry up to 24 channels (Kitchen, 1988).

Microwave. A high-frequency radio wave that can be used for the transmission of television signals. Microwaves are distorted by trees or buildings in their path.

Modem. Modulator-demodulator; a device that modulates and demodulates a signal (varies its amplitude, frequency or phase) for transmission over a telecommunications channel.

Two-way Interactive Television. A process of communication involving an audio and visual system that connects two or more specifically designed environments through an interactive network so that physically separated groups can take part in the same educational experience (Armold, 1987).

Assumptions

For the purposes of this research, it is assumed that whatever the specific technology used to transmit audio and video signals from one site to another, be it

microwave, fiber optics, or coaxial cable, that the technology does not affect how a teacher accepts ITV.

Method of Inquiry

A survey was sent out to 59 teachers throughout the state of Minnesota who currently teach on ITV. Questions focused on what factors influence acceptance of ITV and asked the teachers to rank in order those factors which most positively influenced their acceptance of ITV. The research that provided identification of these factors is further detailed in the following chapter.

Chapter 2

REVIEW OF THE LITERATURE

The review of the literature consisted of gathering and analyzing material from various sources. These included the following:

1. A computer search was conducted using ERIC on CD ROM. The descriptors used were interactive video, cable television, teacher effectiveness, technology transfer, distance education and educational television.
2. Information Science Abstracts from 1985 to present were searched using "distance education" as a descriptor.
3. Education Index from 1985 to present was used with the descriptors of "extension education" and "television in education."
4. An on-line search of the PALS system was used with descriptors of "two-way television," "distance education" and "interactive television."

The Problem of Interactive Television Research

A review of the literature proved to be a difficult task, because the majority of writings about interactive television are of the narrative or "how to" nature rather than based in research. Many of these "how to" articles reported how well ITV equipment and technology worked, but they largely ignored the role of teachers and there was little evidence of "true" research. This problem was emphasized in the review of the literature on distance education in the elementary and secondary schools in the United States by Williams, Eiserman and Quinn (1988). They concluded that there needs to be much more sophisticated and frequent evaluation and research of ITV. With that said, there were clues in the research regarding factors which influence teacher acceptance of ITV. Let us consider first the factors that negatively influence teacher acceptance of ITV.

Negative Influences

One of the major obstacles to teacher acceptance of ITV reported by Kitchen and Kitchen (1988) was the fear that ITV would replace teachers who would then lose their jobs. One may infer that regardless of considerations of technology, that without reducing these fears, the system will not attract the best teachers and most beneficial

subjects to an ITV system. Teacher inservice is one vehicle used to convey to teachers that ITV in fact can help retain teachers who might be released due to low enrollment.

Morehouse, Hoaglund and Schmidt (1987) found that other negative factors were lack of personal contact, movement and space restrictions, technical problems and delays in transfer of information (p. 5). Each of these problems may be blamed on the nature of ITV, but with teacher inservice these problems can be overcome and turned into positive situations for teachers. Solutions to these concerns could include having a teacher visit and teach at each site to provide more personal contact; change camera placement to allow more freedom of movement; use a fax machine to speed transfer of materials or develop an efficient inter-school delivery system; minimize technical problems through inservice training, hire of technical support people or other solutions specific to the particular situation.

Positive Influences

Of factors that may positively influence teacher acceptance of ITV, time to acquire experience with the medium may be the most important. Hobson (1988) found that there was an increase in positive teacher response over time to ITV. This is significant, for if a given ITV

system begins with a low positive teacher response it can expect the response to improve, especially after thorough inservice training. Among other positive influences Hobson found were that ITV allowed teachers to teach classes that otherwise could not be taught because of low enrollment. Another finding was that the perceived threat to job security decreased over time. This is important, given that loss of jobs due to ITV is a major negative influence (Kitchen & Kitchen, 1988). Hobson also found that fear of technology can be overcome and decreased with exposure. This indicates that acceptance of technology can be positively influenced.

Morehouse, Hoaglund and Schmidt (1987) reported that teachers considered more motivated students, smaller class size (the typical class size was 18 or less), the challenge and professional growth opportunities for themselves as major advantages to ITV (p. 4).

Research suggests that inservice training is another vehicle for influencing the acceptance of ITV. Hobson (1988) found that teacher training was imperative for ITV teaching to be successful. This training allowed teachers to overcome fear of technology and gain confidence in the use of ITV. Morehouse, Hoaglund and Schmidt (1987) contended that inservice training with extensive hands-on work with the equipment, feedback from peers and follow-up

support of teachers should be mandatory for teachers beginning to teach on ITV (p. 5).

Morehouse (1987) found that essential to teacher participation and satisfaction were participation in decision-making, adequate inservice, practice and hands-on with equipment, opportunities for self and peer criticism, and ongoing support from principals and project directors (p. 122). The Morehouse study is useful for the broad hints it offers on further study related to factors that influence teacher acceptance of ITV. These will be explored in chapter three.

Related Research

Related research, as is the case for ITV research in general, was difficult to find. Two studies offer useful guidance for this study.

Greenwood and McDevitt (1987) report on a study which hypothesized that ITV teachers would show greater variety of teaching strategies and show increased effectiveness as measured by student learning and attitude. Although they could not prove their hypothesis, they suggest an exploration of teacher satisfaction with their involvement in planning for ITV would be useful (p. 12).

Kitchen and Kitchen (1988) partially answered Greenwood and McDevitt by concluding that ITV neither enhances nor diminishes a teacher's effectiveness, for

teachers appear to retain their individual "style" (p. 35). This would seem to say that if inservice training is to be a vehicle for promoting teacher acceptance of ITV there need not be time spent in teaching teachers new teaching strategies. Time should be invested in helping teachers adapt their existing teaching strategies to ITV.

Method of Inquiry

Based on the studies sighted in this chapter, 12 specific factors can be identified that positively influence the acceptance of ITV. These factors will give direction to the development of research methodology, developed in detail in the following chapter.

Chapter 3

METHODOLOGY

The methods and procedures used in this study of teacher acceptance of ITV are explained in this chapter under the headings of (a) research design, (b) sample selection, (c) instrumentation, (d) procedures, and (e) method of analysis.

Research Design

The problem to be resolved in this study is to discover those factors which are most likely to influence teacher acceptance/support of ITV.

The research in the previous chapter identified teachers as the most important factor in the success of ITV. It also gave specific factors that influence the acceptance/support of ITV.

Hobson (1988) identified such factors as teachers being allowed to teach classes that otherwise could not be taught because of low enrollment, no job loss due to ITV, and good inservice as influencing acceptance of ITV.

Morehouse, Hoaglund, Schmidt (1987) reported that more motivated students took ITV classes, smaller class

size, the challenge and professional growth opportunities influenced the acceptance of ITV.

Morehouse (1987) found participation in decision making adequate inservice, support from peers/ administration/project directors and hands-on practice with the equipment to be major positive factors.

These 12 factors identified in previous research were used in the survey. The first part of the survey listed the 12 factors and asked respondents to check all the factors that positively influenced the acceptance/support of ITV.

The second part of the survey listed the same 12 factors and asked the teachers to rank each factor from 1-12, one being the factor that most influenced their acceptance/support of ITV, 12 being the factor that least influenced their acceptance/support of ITV.

Sample Selection

The sample consisted of 59 teachers who are currently teaching on ITV, K-12 in Minnesota. Names of schools that use ITV and their project directors were gathered from the Minnesota Department of Education publication Distance Education for All Ages in Minnesota: The K-12 Systems Perspective. Project directors were contacted by phone and asked to select teachers who they felt had accepted ITV and were currently teaching on ITV. Once they had

selected the teachers, the appropriate number of surveys were sent to the project directors. The project directors distributed an envelope to each teacher that included a cover letter, survey and stamped, self-addressed envelope. Five directors were sent a total of 55 surveys to distribute. In addition, a sixth project director directly provided four names of teachers and these individuals were sent the survey directly in the mail.

Instrumentation

A survey was determined to be the most efficient method to obtain information from people in various locations throughout the state. As stated earlier, factors that influenced the acceptance/support of ITV as identified in the research of Hobson (1988), Kitchen and Kitchen (1988), Morehouse, Hoaglund and Schmidt (1987), and Morehouse (1987) were compiled and used in the survey. Factors identified as positively influencing acceptance/ support of ITV were good inservice, teaching a subject appropriate for ITV, motivated students, smaller class size, teaching classes they otherwise would not because of low enrollment, no job loss and/or job gains due to ITV., professional growth, peer, administrative and project director support, adequate training with the equipment, technical support, participation in decision making and the challenge.

Procedures

Six ITV directors were contacted by Phone during the week of March 9-13, 1992. The purpose of the survey was explained and their help in identifying teachers who currently taught on and accepted/supported ITV and in distributing the survey was requested. A packet was sent to five project directors on March 25, 1992 which included a cover letter to the individual project director and a sample cover letter and survey that they would be distributing to the teachers. Also in the packet were 10-15 sealed envelopes labeled "ITV Survey" that contained a cover letter, survey and stamped self-addressed envelope. These were to be distributed by the directors to the teachers as soon as possible.

One project director provided the names of four teachers who the director recommended take part in the survey. These four teachers were mailed a cover letter, survey and self-addressed stamped envelope directly to their school address on March 25, 1992.

On April 7, 1992, after 32 surveys had been returned, a follow-up letter was sent to the five project directors thanking them for their help and encouraging them to remind their teachers to return their surveys as soon as possible. An additional six surveys were returned for a total of 38 or a 66% rate of return.

Samples of the cover letter to the project directors, cover letter to the teachers, survey instrument and follow-up letter are included in the appendix.

Method and Analysis

The first part of the survey was intended to determine what percentage of responding teachers were actually influenced by each of the 12 factors that influence the acceptance/support of ITV as determined by the previous research.

The second part of the survey was designed to determine which were the most important positive factors influencing the acceptance/support of ITV, down through the least important factor. The mean response to each factor was determined and is reported in the following chapter.

Chapter 4

REPORT OF FINDINGS

In Part One of the survey the respondents were asked to check as many of the 12 factors identified by the previous research that influenced their acceptance/support of ITV. The rank is reported in Tables 1-12, with a rank of 1 meaning this question received the most responses down to 12 which received the least responses. A (T) after the number means it had the same number of responses as one or more of the other questions and is reported as a tie. The results are reported below.

Table 1

Research Statement 1. The subject I teach is appropriate for ITV.

Responses	Percent	Rank
28	74%	3

Table 2

Research Statement 2. Good inservice on ITV has been provided.

Responses	Percent	Rank
7	18%	12

Table 3

Research Statement 3. More motivated students take ITV courses.

Responses	Percent	Rank
7	18%	12

Table 4

Research Statement 4. ITV has smaller size classes.

Responses	Percent	Rank
7	18%	12

Table 5

Research Statement 5. ITV allows me to teach a class I otherwise couldn't because of low enrollment.

Responses	Percent	Rank
21	55%	6 (T)

Table 6

Research Statement 6. ITV has not caused job loss and/or has created jobs.

Responses	Percent	Rank
21	55%	6 (T)

Table 7

Research Statement 7. ITV has contributed to my professional growth.

Responses	Percent	Rank
26	68%	4

Table 8

Research Statement 8. I get to participate in the decision making process for ITV.

Responses	Percent	Rank
11	29%	10

Table 9

Research Statement 9. I receive support from my peers/ administration/project director.

Responses	Percent	Rank
21	55%	6 (T)

Table 10

Research Statement 10. I have received hands-on training/workshops with the equipment.

Responses	Percent	Rank
29	76%	1 (T)

Table 11

Research Statement 11. I receive sufficient technical support.

Responses	Percent	Rank
29	76%	1 (T)

Table 12

Research Statement 12. I enjoy the challenge.

Responses	Percent	Rank
13	34%	9

Table 13

Previous Findings Using a Bar Graph

The second part of the survey took the same 12 factors identified in Part One and asked the respondents to rank them in order of how each factor influenced their acceptance/support of ITV. One was the value given to the most influential factor down to 12, the least influential factor. The mean and the rank for each statement is reported below. The mean was determined by adding the scores of each respondent to a question and dividing by the number of respondents to arrive at the average numerical response given to each question.

Table 13

Bar Graph Showing Previous Findings

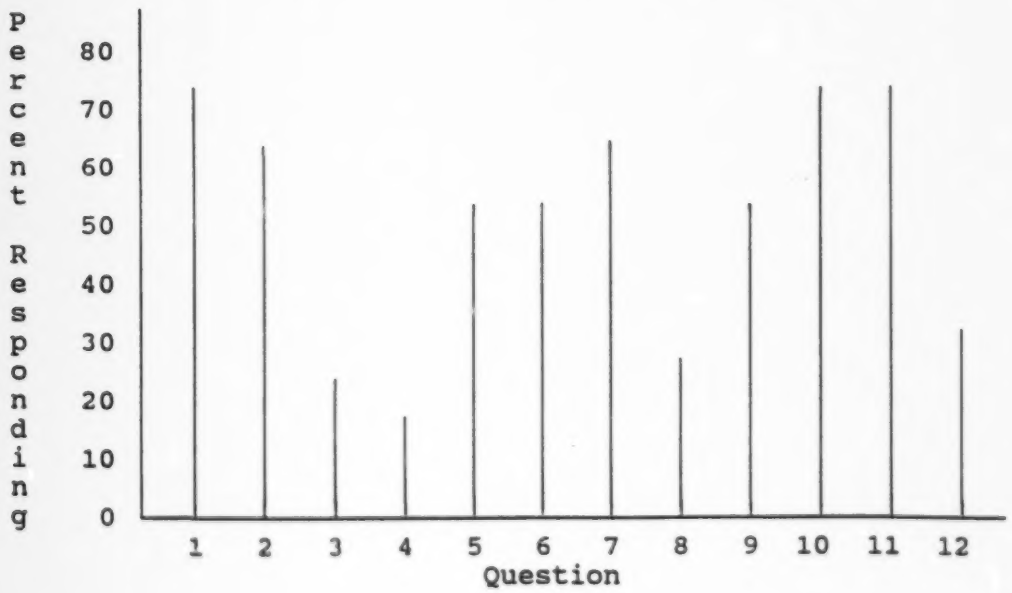

Table 14

Mean and Rank According to How Each Factor Influenced Teachers' Acceptance/Support of ITV

Mean	Statement	Rank
4.86	ITV has contributed to my professional growth.	1
5.03	The subject I teach is appropriate for ITV.	2
5.08	ITV allows me to teach a class I otherwise could not because of low enrollment.	3
5.35	I have received hands-on training/ workshops with the equipment.	4
5.63	I enjoy the challenge.	5
5.64	Good inservice on ITV has been provided.	6
6.11	I receive sufficient technical support.	7
7.00	I receive support from my peers/ administration/project director.	8
7.12	ITV has not caused job loss and/or has created jobs.	9
8.06	More motivated students take ITV courses.	10
8.24	I get to participate in the decision-making process for ITV.	11
9.06	ITV has smaller size classes.	12

Table 15 will compare the two parts of the survey. In Part One the respondents were asked to check as many of the 12 factors identified by previous research that affected their acceptance/support of ITV. The ranking, with 1 receiving the highest ranking and 12 the lowest is reported in column one. Column two reports the rank of the mean response to the same 12 questions.

Table 15

Comparison of the Two Parts of the Survey

Statement	#1	#2
ITV has contributed to my professional growth.	4	1
The subject I teach is appropriate for ITV.	3	2
ITV allows me to teach a class I otherwise could not because of low enrollment.	6(T)	3
I have received hands-on training/workshops with the equipment.	1(T)	4
I enjoy the challenge.	9	5
Good inservice on ITV has been provided.	5	6
I receive sufficient technical support.	1(T)	7
I receive support from my peers/ administration/project director.	6(T)	8
ITV has not caused job loss and/or has created jobs.	6(T)	9
More motivated students take ITV courses.	11	10
I get to participate in the decision-making process for ITV.	10	11
ITV has smaller size classes.	12	12

Chapter 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The problem of the study was to discover those factors which are most likely to influence teacher acceptance of ITV. The survey consisted of two parts, the first part was intended to confirm the 12 identified positive influences of teacher acceptance of ITV as identified by previous research. The second part of the survey was intended to establish a ranking for each of the 12 identified positive factors that influence teacher acceptance of ITV.

Major Findings

In the first part of the survey, respondents were asked to check all factors that influenced their acceptance of ITV. This was to answer question number one of the problem statement in chapter one. The question to be answered was; based on 12 factors identified in previous research, how do ITV teachers in Minnesota compare regarding being positively influenced in their acceptance/support of ITV. Two distinct sections resulted. In the first section, 8 of the 12 factors were

checked by 55% or more of the respondents. These factors in order of number of responses were: receiving sufficient technical support, receiving hands-on training/workshops with the equipment, teaching an appropriate subject for ITV, ITV having contributed to their professional growth, receiving good inservice, receiving support from peers/ administration/project director, ITV allows teaching a class that otherwise would not have been offered due to low enrollment and ITV has not caused job loss and/or has created jobs.

The second distinct section consisted of 4 of the 12 factors and were checked by 34% or fewer of the respondents. These factors were enjoyment of the challenge of teaching on ITV, participation in the decision-making process, having more motivated students and smaller class size.

In the second part of the survey the respondents were asked to rank the 12 factors from most to least influential. The mean was found for each response. The top six factors had a range of .78 from first to sixth. The top six factors, in order of influence, were: ITV contributed to the respondent's professional growth, teaching an appropriate subject for ITV, ITV allowed the teaching of a class that otherwise would not have been offered due to low enrollment, having received hands-on

training/workshops with the equipment and good inservice had been provided.

The bottom six factors were more spread out, having a range of 2.95 from seventh to twelfth. The six least influential factors were: receiving sufficient technical support, receiving support from peers/administration/ project directors, no job loss and/or more jobs due to ITV, more motivated students take ITV courses, participating in the decision-making process and smaller class size for ITV classes.

Research questions two and three asked which factor had the most influence in the acceptance/support of ITV and which factor had the least influence in the acceptance/support of ITV. This study determined that ITV's contribution to professional growth was the most influential factor and smaller class size was the least influential factor.

In the first part of the survey, the respondents were asked to select those factors which influenced their acceptance of ITV. The two top responses both received a 76% response rate. They were receiving hands-on training/ workshops and technical support. When the respondents were asked to rank the 12 factors in order of influence these two factors ranked fourth and seventh, respectively.

Conclusions

The acceptance of ITV by teachers is the most important factor in determining the success of ITV (Kitchen & Kitchen, 1988; Morehouse, Hoaglund, & Schmidt, 1987). Previous studies have identified factors that influence the acceptance of ITV. None have identified how influential any of the factors were to the acceptance of ITV. From the responses of 38 ITV teachers in the state of Minnesota some conclusions can be drawn as to how these factors influenced the respondents.

In the first part of the survey it was found that 8 of the 12 factors that previous research had identified as influencing the acceptance/support of ITV influenced 55% or more of the respondents. These factors were receiving sufficient technical support, receiving hands on training/workshops with the equipment, teaching an appropriate subject for ITV, ITV having contributed to their professional growth, receiving good inservice, receiving support from peers/administration/project director, ITV allows teaching a class that otherwise would not have been offered due to low enrollment and ITV has not caused job loss and/or has created jobs.

Then there was a big gap with only 34% or fewer of the respondents influenced by the remaining four factors. These factors were enjoyment of the challenge of teaching

on ITV, participation in the decision making process, having more motivated students and smaller class size. One may conclude that there is a definite division in the factors and their influence on acceptance/support of ITV, with the first eight having a greater influence and the last four being of lesser influence.

The most respondents (76%) selected receiving hands on training/workshops and technical support as a factor that influenced their acceptance of ITV. When asked to rank the 12 factors, these were ranked fourth and seventh in their influence of the acceptance of ITV. One can speculate that the difference may be caused by project directors being aware of technical problems that can affect ITV and addressing them through training and technical support. With teachers then feeling comfortable with the technical aspects of ITV, they are allowed to concentrate on other areas, so these two factors rank lower than the number of responses alone in the first part of the survey would predict.

Recommendations

The research found in the first part of the survey that 8 of the 12 factors that previous research had identified as influencing the acceptance/support of ITV influenced 55% or more of the respondents. These factors were receiving sufficient technical support, receiving

hands on training/workshops with the equipment, teaching an appropriate subject for ITV, ITV having contributed to their professional growth, receiving good inservice, receiving support from peers/administration/project director, ITV allows teaching a class that otherwise would not have been offered due to low enrollment and ITV has not caused job loss and/or has created jobs.

In designing a program to influence teacher acceptance/support of ITV these first eight factors should be stressed because they have the greatest potential to influence teacher acceptance/support of ITV. The ninth ranked factor, enjoyment of the challenge, was ranked number 5 of 12 when respondents ranked the factors as to their influence on the acceptance/support of ITV. Because of this higher ranking it should be considered as a factor to use after a program is set in place, but not at the onset. The research seems to say that it initially is a minimal factor, but grows in importance as teachers gain experience with ITV.

The last three factors, enjoyment of the challenge of teaching on ITV, participation in the decision making process, having more motivated students and smaller class size, have although influential themselves, a more marginal impact on influencing the acceptance/support of ITV and as such should be used sparingly or not at all.

A strong emphasis should be placed on technical support and training for teachers so it may become, as it did for the respondents, a matter of moderate influence. Without attention to strong technical support, this factor would become the most influential factor.

The area of inquiry of this study has been largely neglected in the literature. Even though research identified factors that influence acceptance of ITV, little was found that suggested how influential each of these factors were. This study is a first step. Much is unknown and only tentative conclusions can be drawn from the response. Further research with a broader sample may allow further conclusions. Research into the factors other than the 12 identified in this study may identify other factors that influence the acceptance of ITV.

ITV has been used in Minnesota since 1980. Since that time our understanding of the technology has grown rapidly, while our understanding of the most important factor critical to the success of ITV, the teacher, has grown very slowly. Other studies of this nature could prove valuable to the success of ITV.

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APPENDIX

Harmony High School
145 Main Avenue South
Harmony, MN 55939
March 25, 1992

Name
Title
Address
City, State, Zip

Dear Directors Name:

Thank you very much for helping me out with this ITV survey. Enclosed are 10 surveys, with cover letter and stamped, self addressed envelopes for the teachers and a copy of the cover letter and the survey for you. Please distribute these to teachers who you would consider to be supportive of ITV as soon as possible. I've asked that the surveys be returned by Friday, April 3.

Thanks again for your help.

Sincerely,

Jerry Schnabel
Media Director

Harmony High School
145 Main Avenue South
Harmony, MN 55939
March 25, 1992

Name
Title
Address
City, State, Zip

Dear Directors Name:

Thank you once again for your help with my ITV survey. If you have any teachers who may not have returned the survey, please encourage them to do so as soon as possible.

Sincerely,

Jerry Schnabel
Media Director

Interactive Television Survey

Which of the following factors influenced your acceptance/ support of Interactive Television? Check as many as appropriate.

____ 1. The subject I teach is appropriate for ITV.
____ 2. Good inservice on ITV has been provided.
____ 3. More motivated students take ITV courses.
____ 4. ITV has smaller size classes.
____ 5. ITV allows me to teach a class I otherwise couldn't because of low enrollment.
____ 6. ITV has not caused job loss and/or has created jobs.
____ 7. ITV has contributed to my professional growth.
____ 8. I get to participate in the decision making process for ITV.
____ 9. I receive support from my peers/administration/ project director.
____ 10. I have received hands on training/workshops with the equipment.
____ 11. I receive sufficient technical support.
____ 12. I enjoy the challenge.

Please rank the following factors as to how much they influenced your acceptance/support of ITV. Rank from 1-12, with 1 being the most important factor down to 12, the least important factor.

____ 1. The subject I teach is appropriate for ITV.
____ 2. Good inservice on ITV has been provided.
____ 3. More motivated students take ITV courses.
____ 4. ITV has smaller size classes.
____ 5. ITV allows me to teach a class I otherwise couldn't because of low enrollment.
____ 6. ITV has not caused job loss and/or has created jobs.
____ 7. ITV has contributed to my professional growth.
____ 8. I get to participate in the decision making process for ITV.
____ 9. I receive support from my peers/administration/ project director.
____ 10. I have received hands on training/workshops with the equipment.
____ 11. I receive sufficient technical support.
____ 12. I enjoy the challenge.

Thank you for your time. Please send the completed survey to:

Jerry Schnabel
Harmony High School
145 Main Avenue South
Harmony, MN 55939

March 15, 1992

Dear Colleague:

I am a graduate student in Information Media at St. Cloud State University and am conducting a survey of the factors that influence acceptance of Interactive Television (ITV).

Since only a few individuals are being contacted, your response will be greatly appreciated. The survey should take no more than a few minutes to complete. Please complete the survey and return by Friday, April 3, in the postage-paid envelope. If you would like a copy of the results, please indicate that on your survey and be sure to include your name and address.

Thank you for your cooperation.

Sincerely,

Jerry Schnabel
Media Director
Harmony High School
145 Main Avenue South
Harmony, MN 55939